

GGCACGAGTCGGAGCCGGG		
CGGAGGGAGGGGGAAGAGGAGCGCAGGGTGAGAGTGAGCCGAGGCTTCGGGAGGCGAGGGGGGGGGGAGCAGC		
GCCGAGGYCGCCGCTCCGCTCCGGCCTAGGACTAGGGGTGGGGACGACAGCCCCCG	ATG CCG GGG GAG	M P G E 4 12
T E E P R P P E Q Q D Q E G E A A K A		24
ACG GAA GAG CCG AGA CCC CCG GAG CAG CAG GAC GAA GGG GGA GAG GCG GCC AAG GCG		72
A P E E P Q Q R P P E A V A A A P A G T		44
GCT CCG GAG GAG CCC CAA CAA CCG CCC CCT GAG GCG GTC GCG GCG CCT GCA GGG ACC		132
T S S R V L R G G R D R G A A A A A A		64
ACT AGC AGC CGC GTG CTG AGG GGA GGT CGG GAC CGA GGC CGG GCT GCG GCC GCC GCG		192
A A A V S R R R K A E Y P R R R S S P		84
GCC GCA GCT GTG TCC CGC CGG AGG AAG GCC GAG TAT CCC CGC CGG CGG AGG AGC AGC CCC		252
S A R P P D V P G Q Q P Q A A K S P S P		104
AGC GCC AGG CCT CCC GAC GTC CCC GGG CAG CCC CAG GCC GCG AAG TCC CCG TCT ECA		312
V Q G K K S P R L L C I E K V T T D K D		124
GTT CAG GGC AAG AAG AGT CCG CGA CTC TGA ATA GAA AAA GTA ACA ACT GAT AAA GAT		372
P K E E K E E D D S A L P Q E V S I A		144
CCC AAG GAA GAA AAA GAG GAA GAC GAT TCT GCC CTC CCT CAG GAA GTT TCC ATT GCT		432

FIG.1A

A S R P S R G W R S S R T S V S R H R D	164
GCA TCT AGA CCT AGC CGG GGC TGG CGT AGT AGT AGG ACA TCT GTT TCT CGC CAT CGT GAT	492
T E N T R S S R S K T G S L Q L I C K S	184
ACA GAG AAC ACC CGA AGC TCT CGG TCC AAG ACC GGT TCA TTG CAG CTC ATT TGC AAG TCA	552
E P N T D Q L D Y D V G E E H Q S P G G	204
GAA CCA AAT ACA GAC CAA CTT GAT TAT GAT GTT GGA GAA GAG CAT CAG TCT CCA GGT GGC	612
I S G E E E E E E E M L I S E E E I	224
ATT AGT GGT GAA GAG GAA GAG GAG GAG GAA GAG ATG TTA ATC AGT GAA GAG GAG ATA	672
P F K D D P R D E T Y K P H L E R E T P	244
CCA TTC AAA GAT GAT CCA AGA GAT GAG ACC TAC AAA CCC CAC TTA GAA AGG GAA ACC CCA	732
K P R R K S G K V K E E K E K E I K V	264
AAG CCA CGG AGA AAA TCA GGG AAG GTA AAA GAA GAG AAG GAG AAG GAA ATT AAA GTG	792
E V E V E V K E E E N E I R E D E E P P	284
GAA GTA GAG GTG GAG GTG AAA GAA GAG GAG AAT GAA ATT AGA GAG GAT GAG GAA CCT CCA	852
R K R G R R K D D K S P R L P K R R K	304
AGG AAG AGA GGA AGA CGA AAA GAT GAC AAA AGT CCA CGT TTA CCC AAA AGG AGA AAA	912
K P P I Q Y V R C E M E G C G T V L A H	324
AAG CCT CCA ATC CAG TAT GTC CGT TGT GAG ATG GAA GGA TGT GGA ACT GTC CTT GCC CAT	972

FIG.1B

P R Y L Q H H I K Y Q H L L K K K Y V C 344  
 CCT CGC TAT TTG CAG CAC CAC ATT AAA TAC CAG CAT TTG CTG AAG AAG AAA TAT GTA TGT 1032  
  
 P H P S C G R L F R L Q K Q L L R H A K 364  
 CCC CAT CCC TCC TGT GGA CGA CTC TTC AGG CTT CAG AAG CAA CTT CTG CGA CAT GCC AAA 1092  
  
 H H T D Q R D Y I C E Y C A R A F K S S 384  
 CAT CAT ACA GAT CAA AGG GAT TAT ATC TGT GAA TAT TGT GCT CGG GCC TTC AAG AGT TCC 1152  
  
 H N L A V H R M I H T G E K P L Q C E I 404  
 CAC AAT CTG GCA GTG CAC CGG ATG ATT CAC ACT GGC GAG AAG CCA TTA CAA TGT GAG ATC 1212  
  
 C G F T C R Q K A S L N W H M K K H D A 424  
 TGT GGA TTT ACT TGT CGA CAA AAG GCA TCT CTT AAT TGG CAC ATG AAG AAA CAT GAT GCA 1272  
  
 D S F Y Q F S C N I C G K K F E K K D S 444  
 GAC TCC TTC TAC CAG TTT TCT TGC AAT ATC TGT GGC AAA AAA TTT GAG AAG AAG GAC AGC 1332  
  
 V V A H K A K S H P E V L I A E A L A A 464  
 GTA GTG GCA CAC AAG GCA AAA AGC CAC CCT GAG GTG CTG ATT GCA GAA GCT CTG GCT GCC 1392  
  
 N A G A L I T S T D I L G T N P E S L T 484  
 AAT GCA GGC GCC CTC ATC ACC AGC ACA GAT ATC TTG GGC ACT AAC CCA GAG TCC CTG ACG 1452  
  
 Q P S D G Q G L P L L P E P L G N S T S 504  
 CAG CCT TCA GAT GGT CAG GGT CTT CCT CTT CTT GAG CCC TTG GGA AAC TCA ACC TCT 1512

FIG.1C

203020" T422900T

G E C L L L E A E G M S K S Y C S G T E 524  
GGA GAG TGC CTA CTG TTA GAA GCT GAA GGG ATG TCA AAG TCA TAC TGC AGT GGG ACG GAA 1572  
R V S L M A D G K I F V G S G S S G G T 544  
CGG GTG AGC CTG ATG GCT GAT GGG AAG ATC TTT GTG GGA AGC GGC AGC AGT GGA GGC ACT 1632  
E G L V M N S D I L G A T T E V L I E D 564  
GAA GGG CTG GTT ATG AAC TCA GAT ATA CTC GGT GCT ACC ACA GAG GTT CTG ATT GAA GAT 1692  
S D S A G P \* 570  
TCA GAC TCT GCC GGA CCT TAG TGGACAGGAAGACTTGGGGCATGGGACAGCTCAGACTTTGTATTTAAAGT 1761  
TAAAAGGACAAAAAAAAAAAAAAAAAAAA 1791

FIG.1D

U.S. PATENT APPLICATION NO. To Be Assigned  
FILED: Concurrently Herewith  
PENNIE & EDMONDS LLP (Atty. Dkt. # 7853-233-999)  
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FIG. 2A

T A C L L L P G R L D C R L G P G A P A	142
ACC GCG TGC CTC CTG CTG CCC GGC CGC CTG GAC TGC AGG CTG GGC CCG GGC CCC GCC	426
G A Q P A Q P P S S Y S L P L L C K V	162
GGC GCG CAG CCT GCG CAG CCG CCC TCG TCC TAC TCG CTC CCC CTC CTG TGC AAA GTG	486
F R W P D L R H S S E V K R L C C E S	182
TTC AGG TGG CCG GAT CTC AGG CAT TCC TCG GAA GTC AAG AGG CTG TGT TGC TGT GAA TCT	546
Y G K I N P E L V C C N P H H L S R L C	202
TAC GGG AAG ATC AAC CCC GAG CTG GTG TGC TGC AAC CCC CAT CAC CTT AGC CGA CTC TGC	606
E L E S P P P P Y S R Y P M D F L K P T	222
GAA CTA GAG TCT CCC CCT CCT TAC TCC AGA TAC CCG ATG GAT TTT CTC AAA CCA ACT	666
A D C P D A V P S S A E T G G T N Y L A	242
GCA GAC TGT CCA GAT GCT GTG CCT TCC TCC GCT GAA ACA GGG GGA ACG AAT TAT CTG GCC	726
P G G L S D S Q L L L L E P G D R S H W C	262
CCT GGG GGG CTT TCA GAT TCC CAA CTT CTT CTG GAG CCT GGG GAT CGG TCA CAC TGG TGC	786
V V A Y W E E K T R V G R L Y C V Q E P	282
GTG GTG GCA TAC TGG GAG GAG AAG ACG AGA GTG GGG AGG CTC TAC TGT GTC CAG GAG CCC	846
S L D I F Y D L P Q G N G F C L G Q L N	302
TCT CTG GAT ATC TTC TAT GAT CTA CCT CAG GGG AAT GGC TTT TGC CTC GGA CAG CTC AAT	906

FIG.2B

S D N K S Q L V Q K V R S K I G C G I Q 322  
TCG GAC AAC AAG AGT CAG CTG GTG CAG AAG GTG CGG AGC AAA ATC GGC TGC GGC ATC CAG 966

L T R E V D G V W V Y N R S S Y P I F I 342  
CTG ACG CGG GAG GTG GAT GGT GTG TGG GTG TAC AAC CGC AGC AGT TAC CCC ATC TTC ATC 1026

K S A T L D N P D S R T L L V H K V F P 362  
AAG TCC GCC ACA CTG GAC AAC CCT GAC TCC AGG ACG CTG TTG GTA CAC AAG GTG TTC CCC 1086

G F S I K A F D Y E K A Y S L Q R P N D 382  
GGT TTC TCC ATC AAG GCT TTC GAC TAC GAG AAG GCG TAC AGC CTG CAG CGG CCC AAT GAC 1146

H E F M Q Q P W T G F T V Q I S F V K G 402  
CAC GAG TTT ATG CAG CAG CCG TGG ACG GGC TTT ACC GTG CAG ATC AGC TTT GTG AAG GGC 1206

W G Q C Y T R Q F I S S C P C W L E V I 422  
TGG GGT CAG TGC TAC ACC CGC CAG TTC ATC AGC AGC TGC CCG TGC TGG CTA GAG GTC ATC 1266

F N S R \* 426  
TTC AAC AGC CGG TAG CCGCGTGGGAGGGGACAGCGGTGAGCTGAGCAGGCCACACTTCAAACACTATTGCT 1278

GCTAATATTTCTCCTGAGTGCTTGTCTTTCATGCAAACCTCTTTGGTCTTTTTTTTTTTTGTGTTGGTTTCT

TCTTCTCGTCTGTTGTCTGTTTGTGTTTCGCTCTTTGAGAAA TAGCTTATGAAAAGAAATTGTGGGGTTTTT

TGGAAGAAGGGCAGGTATGATCGGCAGGACACCCTGATAGGAAGAGGGGAAGCAGAAAATCCAAGCACCACCAACACACA

FIG.2C

208020" 442901"

GTGTATGAAGGGGGGGTTCATTTCACTTGTGTCAGGAGTGTGTGAGTGTGAGTGTGCGGCTGTGTGTCACGGCT  
GTGCAGAGCGGCAGATGGGGAGACAACGTGCTCTTTGTTTGTGTCTCTTATGGATGTCCCCAGCAGAGAGGTTTGCA  
GTCCCAAGCGGTGTCTCTCCTGCCCCCTTGGACACGCTCAGTGGGGCAGAGGCAGTACCTGGGCAAGCTGGCGGCTGGGG  
TCCCAGCAGCTGCCAGGAGCAGGCTCTGTCCCCAGCCTGGGAAAGCCCTGCCCTCCTCTCCCTCATCAAGGACACG  
GGCCTGTCCACAGGCTTCTGAGCAGCGAGCCTGCTAGTGGCCGAACCAACCAATATTTTCATCCTTGCTTATTCC  
CTTCTGCCAGCCCCCTGCCATTGTAGCGTCTTTCTTTTTTGGCCATCTGCTCCTGGATCTCCCTGAGATGGGCTTCCCA  
AGGGCTGCCGGGGCAGCCCCCTCACAGTATTGCTCACCCAGTGCCTCTCCCCCTCAGCCTCTCCCCCTGCCCTGGT  
GACATCAGGTTTTTCCCGGACTTAGAAAAACCAGCTCAGCACTGCCTGCCATCCTGTGTGTTAAGCTCTGCTATTAG  
GCCAGCAAGCGGGATGTCCCTGGGAGGACATGCTTAGCAGTCCCCTTCCCTCCAAGAAGGATTTGGTCCGTCATAAC  
CCAAGGTACCATCCTAGGCTGACACCCTAACTCTTCTTTCTTTCTTCTACAACCTACACTCGTATGATACTTCGACA  
CTGTTCTTAGCTCAATGAGCATGTTTAGACTTTTAACATAAGCTATTTTTCTAACTACAAAGGTTTAAATGAACAAGAGA  
AGCATTCTCATTGGAAATTTAGCATTGTAGTGTCTTTGAGAGAGAAAGGACTCCTGAAAAAAAACCTGAGATTTATTAAA  
GAAAAAAATGTATTTTATGTTATATATAATAATATTATTACTTGTAAATATAAGAGCGTTTTATAAGCATCATTATTTA

FIG.2D



208020" 7479001

TGTATTGTGCAATGTGTATAACAAGAAAAATAAAGAAAAGATGCACCTTGCTTTAATATAAATGCAAAATAACAAATGC  
CAAAATTAAGAAAGATAAACACAAAGATTGGTGTTTTTCTATGGGTGTTATCACCTAGCTGAATGTTTTCTAAAGGAG  
TTTATGTTCCATTAAACGATTTTTAAAAATGTACACTTGAAAAAAAAAAAAAAAAAAAA

FIG.2E

GGCACGAGGTTGCCCTGGCGGAGCAGAGACAGGCCCTCGGGTGGAGGTC

TTTGTTTTCATAAGAGCCTGAGAGAGATTTTCTAAGAT ATG TGT AAC ACA CCA ACG TAC TGT GAC CTA 10  
30

G K A A K D V F N K G Y G F G M V K I D 30  
GGA AAG GCT GCT AAG GAT GTC TTC AAC AAA GGA TAT GGC TTT GGC ATG GTC AAG ATA GAC 90

L K T K S C S G V E F S T S G H A Y T D 50  
CTG AAA ACC AAG TCT TGT AGT GGA GTG GAA TTT TCT ACT TCT GGT CAT GCT TAC ACT GAT 150

T G K A S G N L E T K Y K V C N Y G L T 70  
ACA GGG AAA GCA TCA GGC AAC CTA GAA ACC AAA TAT AAG GTC TGT AAC TAT GGA CTT ACC 210

F T Q K W N T D N T L G T E I S W E N K 90  
TTC ACC CAG AAA TGG AAC ACA GAC AAT ACT CTA GGG ACA GAA ATC TCT TGG GAG AAT AAG 270

L A E G L K L T L D T I F V P N T G K K 110  
TTG GCT GAA GGG TTG AAA CTG ACT CTT GAT ACC ATA TTT GTA CCG AAC ACA GGA AAG AAG 330

S G K L K A S Y K R D C F S V G S N V D 130  
AGT GGG AAA TTG AAG GCC TCC TAT AAA CGG GAT TGT TTT AGT GTT GGC AGT AAT GTT GAT 390

I D F S G P T I Y G W A V L A F E G W L 150  
ATA GAT TTT TCT GGA CCA ACC ATC TAT GGC TGG GCT GTG TTG GCC TTC GAA GGG TGG CTT 450

FIG.3A

A G Y Q M S F D T A K S K L S Q N N F A	170
GGT GGC TAT CAG ATG AGT TTT GAC ACA GCC AAA TCC AAA CTG TCA CAG AAT AAT TTC GCC	510
L G Y K A A D F Q L H T H V N D G T E F	190
CTG GGT TAC AAG GCT GCG GAC TTC CAG CTG CAC ACA CAT GTG AAC GAT GGC ACT GAA TTT	570
G G S I Y Q K V N E K I E T S I N L A W	210
GGG GGT TCT ATC TAC CAG AAG GTG AAT GAG AAG ATT GAA ACA TCC ATA AAC CTT GCT TGG	630
T A G S N N T R F G I A A K Y M L D C R	230
ACA GCT GGG AGT AAC AAC ACC CGT TTT GGC ATT GCT GCT AAG TAC ATG CTG GAT TGT AGA	690
T S L S A K V N N A S L I G L G Y T Q T	250
ACT TCT CTC TCT GCT AAA GTA AAT AAT GCC AGC CTG ATT GGA CTG GGT TAT ACT CAG ACC	750
L R P G V K L T L S A L I D G K N F S A	270
CTT CGA CCA GGA GTC AAA TTG ACT TTA TCA GCT TTA ATC GAT GGG AAG AAC TTC AGT GCA	810
G G H K V G L G F E L E A *	283
GGA GGT CAC AAG GTT GGC TTG GGA TTT GAA CTG GAA GCT TAA TGTGTTTTGAGGAAAGCATCAGA	849
TTTGTCCTGGAAGTGAAGAGAAAATGAACCCCACTATGTTTTGGCCTTAAAAATTCTTCTGTGAAATTTCAAAGTGTGAA	
CTTTTATTCTTCCAAGAAATTGTAATCTCTCCCACACTGAAGTCTAGGGTTGCCAATCCCTCCTGAGGGAGACGCTT	
GAAGGCATGCCTGGAAGTTGTCATGTTTGTGCCACGTTTCAGTTCAGTTCGTAAGTGTATTAAATGTGTCTCAGCG	

FIG. 3B

2020020" 144900T

ACAGTG TAGCGTCATGTTAGAGGAGACGATCTGACCCACCAGTTTGATACATCAGTCCTGCATGTCCCACACCATTTTT  
TCATGACCTTGTAATATACTGGTCTCTGTGCTATAGTGAATCTTTGGTTTTGCATCATAGTAAAAATAAACCCCA  
TCACATTTGGAACATAAAAAAAAAAAAAAAAAAAAA

FIG.3C

T S L A L V L N L L Q I Q R N V T L F P 20  
 ACG AGC CTA GCC CTG GTG CTC AAC CTG CTG CAG ATC CAG AGG AAT GTC ACT CTC TTC CCC 60  
  
 E E V I A T I F S S A W W V P P C C G T 40  
 GAG GAG GTG ATC GCC ACC ATC TTT TCC TCC GCC TGG TGG GTC CCT CCC TGC TGC GGG ACA 120  
  
 A A V V G L L Y P C I D S H L G E P H 60  
 GCA GCT GCT GTT GTT GGC CTA CTG TAC CCC TGT ATC GAC AGT CAC CTC GGA GAA CCC CAC 180  
  
 K F K R E W A S V M R C I A V F V G I N 80  
 AAA TTT AAG AGA GAA TGG GCC AGT GTC ATG CGC TGC ATA GCA GTT TTT GTT GGC ATT AAC 240  
  
 H A S A K L D F A N N V Q L S L T L A A 100  
 CAC GCC AGT GCT AAA TTG GAT TTT GCC AAT AAT GTC CAG CTG TCC TTG ACT TTA GCA GCC 300  
  
 L S L G L W W T F D R S R S G L G L G I 120  
 CTA TCT TTG GGC CTT TGG TGG ACA TTT GAT CGT TCC AGA AGT GGC CTT GGG CTG GGG ATC 360  
  
 T I A F L A T L I T Q F L V Y N G V Y Q 140  
 ACC ATA GCT TTT CTA GCT ACG CTG ATC ACG CAG TTT CTC GTG TAT AAT GGT GTC TAT CAG 420  
  
 Y T S P D F L Y I R S W L P C I F F S G 160  
 TAT ACA TCC CCA GAT TTC CTC TAT ATT CGT TCT TGG CTC CCT TGT ATA TTT TTC TCA GGA 480  
  
 G V T V G N I G R Q L A M G V P E K P H 180  
 GGC GTC ACG GTG GGG AAC ATA GGA CGA CAG TTA GCT ATG GGT GTT CCT GAA AAG CCC CAT 540

FIG.4A

S	D	*		182
AGT	GAT	TGA	GTCTTCAAACCCGATTCTGAGAGCAAGGAAGATTTTGGAGAAAAATCTGACTGTGGATTATGAC	546
AA	GAT	TAT	CTTTTCTTAAGTAATCTATTTAGATCGGGCTGACTGTACAAATGACTCCTGGAAAAAACTCTTCACCT	
AG	CT	AGAA	TAGGGAGGTGGAGAA TGATGACTTACCCTGAAGTCTCCCTTGACTGCCCGCCTGGCGCCTGTCTGTGC	
CCT	GG	AGCA	TTCTGCCCAGGCTACGTGGGTTCAGGCAGGTGGCAGCTTCCCAAGTATTCGATTTTCATGTGATTAA	
AACA	AG	TGCCA	TATTTCAAAAAAAAAAAAAAMCTCGAGACCAACCCGCAGTTTGTGTCAAGTCCCCAAAGGAGGT	
AGG	TT	GATGGT	GCTTAACAAACATGAAGTATGGTGAATAGGAATAATTTATCCNAAAGATTTTTAAAAATAGGGCT	
GTG	TT	AAAAAAAA	AAAAAAAAAAAA	

FIG.4B

M C H S R S C H P T M T I L Q A P T P A 20  
ATG TGT CAC TCT CGC AGC TGC CAC CCG ACC ATG ACC ATC CTG CAG GCC CCG ACC CCG GCC 60

P S T I P G P R R G S G P E I F T F D P 40  
CCC TCC ACC ATC CCG GGA CCC CCG CGG GGC TCC GGT CCT GAG ATC TTC ACC TTC GAC CCT 120

L P E P A A A P A G R P S A S R G H R K 60  
CTC CCG GAG CCC GCA GCG GCC CCT GCC GGG CGC CCC AGC GCC TCT CGC GGG CAC CGA AAG 180

R S R R V L Y P R V V R R Q L P V E E P 80  
CGC AGC CGC AGG GTT CTC TAC CCT CGA GTG GTC CGG CGC CAG CTG CCA GTC GAG GAA CCG 240

N P A K R L L F L L L L T I V F C Q I L M 100  
AAC CCA GCC AAA AGG CTT CTC TTT CTG CTG CTC ACC ATC GTC TTC TGC CAG ATC CTG ATG 300

A E E G V P A P L P P E D A P N A A S L 120  
GCT GAA GAG GGT GTG CCG GCG CCC CTG CCT CCA GAG GAC GCC CCT AAC GCC GCA TCC CTG 360

A P T P V S P V L E P F N L T S E P S D 140  
GCG CCC ACC CCT GTG TCC CCC GTC CTC GAG CCC TTT AAT CTG ACT TCG GAG CCC TCG GAC 420

Y A L D L S T F L Q Q H P A A F \* 157  
TAC GCT CTG GAC CTC AGC ACT TTC CTC CAG CAA CAC CCG GCC GGC TTC TAA 471

CTGTGACTCCCGCACTCCCCAAAAGAATCCGAAAAACACAAAGAACACAGGGGTACCTGGTGGCGGAGAGCGTA 550

FIG. 5A

TCCCCAACTGGGACTTCGAGGCAACTTGAACTCAGAACACTACAGCGGAGACGCCACCGGTGCTTGAGCGGGACCG	629
AGGCGCACAGAGACCGAGGCGCATAGAGACCGAGGCACAGCCAGCTGGGGCTAGGCCCGGTGGGAAGGAGAGCGTCGT	708
TAATTTATTTCTTATTGCTCCTAAATTAATTTATATGTAATTTATGTACGTCTCTAGGTGATGGAGATGTGTACGTA	787
ATATTTATTTTAACTTATGCAAGGGGTGTGAGATGTTCCCTCTGCTGTAAATGCAGGTCTCTTGGTATTTATTGAGCTTT	866
GTGGGACTGGTGGGAAGCAGGACACCTGGAACCTCGGCAAGTAGGAGAAGAAATGGGGAGGACTCGGGTGGGGGAGGAC	945
GTCCCGGCTGGGATGAAGTCTGGTGGTGGTGGTAAGTTTAGGAGGTGACTGCATCCTCCAGCATCTCAACTCCGTCGTG	1024
TCTACTGTGTGAGACTTCGGCGGACCAATTAGGAATGAGATCCGTGAGATCCTTCCATCTTCTTGAAGTCGCCTTTAGGG	1103
TGGCTGCGAGGTAGAGGGTTGGGGGTTGGTGGGCTGTACGGAGCGGACTGTGAGATCGCCTAGTATGTTCTGTGAACA	1182
CAAAATAAAATTGATTTACTGTCAAAAAAAAAAAAAAACTCGAG	1228

FIG. 5B



GAATTCGGCAGGCMCAGGAGCTCCTTTWCTGCGTCTCCCATCATGGGGCTTAGGGTTGAGTCTTCA 68  
GGTTCGGGGCAGGAAGGACGGGCACTCAGGAGGCCCTCCCATCCACAGCCCTCTTTGGGAGGGGGAACTTG 147  
GCAACCGGGAGGCATGTGGATCTTTTCTAAGCAAGATGCTGAGCTGGAAGATGGGGGTGAAGGTAATGTCCCAAA 226  
CTGAAACTTTGCCAGGCAC TGGGAGAGGCTGTGAAC TCTTTCTGGCTTTAGAA TTTAGGTCTAGATCCCAAAAGGCTA 305  
AGTACCCCTGGGGCTAAC CAGAGGCATGCC TGGGCTGAGCTGAACCTTCTGGTGCACTGGCCCTGGCTGACTGCTC 384  
TTCTGCAGGAAGTTGGAGGAGATTCTGAAGTTGATTCCCTCAGGCTGGATGTCCAAGGGGGTTGGAGTTTCTGATGCT 463  
TTCTGTCCCTCTCTTTCTCTCCCTACCAGGTCCACTTCTTTCAGAGGGGCCCTGCGGTGCTCTAAAAGTTCTC 542  
CTGTTAAAGTTAGAGCAAA TTGGTTATTTAAATCAATAAAACTTTTAAAAGTACTAAGACAAC TTTCTAAGAGG 621  
GGAGTGGACAGAGGGCCTGGTGGCAGCTCACAGTTTCTTTTCTGACCTTTTGGTCTCACCCACCAAGTGTCCCACCTGAG 700  
TGCCCACTTGCCCACTGAGGTAATGCCCTGGGGCTCCACCAGTCCAGATCCACAGGGCGCAGCCATGTGGGAGTGGC 779  
GGCTGATTGTACCCAGTAGTGTGATAGCACATTATTCTAACAGCCCAAGAGAGGAAGCAACCCAATGTCCATTAG 858  
CTGATAAATGGATAAATGAAATATGGTAGCTCCGAAGATGGAATATCATTCACCTGAAAAAGAACGAAGTCCAGCA 937  
CCAAAACGTGTACAACATGGATGAAC TTCGATGACTTTGTGCCACATGAAAGAGAGCCAGCCACAAAAGGCCATAT 1016

FIG. 6A

M	S	R	M	G	K	P	I	E	T	Q	K	S	P	P	P	16
ATTGTATGAAATGAA	ATG	TCC	AGA	ATG	GGC	AAA	CCC	ATA	GAG	ACA	CAA	AAA	TCT	CCG	CCA	1079
P	Y	S	R	L	S	P	R	D	E	Y	K	P	L	D	L	36
CCC	TAC	TCT	CGG	CTG	TCT	CCT	CGC	GAC	GAG	TAC	AAG	CCA	CTG	GAT	TCC	1139
L	S	Y	T	E	T	E	A	T	N	S	L	I	T	A	P	56
TTG	TCT	TAC	ACT	GAA	ACG	GAG	GCT	ACC	AAC	TCC	CTC	ATC	ACT	GCT	CCG	1199
D	A	S	M	S	P	D	A	T	K	P	S	H	W	C	S	76
GAC	GCC	AGC	ATG	TCT	CCG	GAC	GCC	ACC	AAG	CCG	AGC	CAC	TGG	TGC	AGC	1259
E	H	R	T	R	V	G	R	L	Y	A	V	Y	D	Q	A	96
GAG	CAC	CGG	ACG	CGC	GTG	GGC	CGC	CTC	TAT	GCG	GTG	TAC	GAC	GAC	GCC	1319
Y	D	L	P	Q	G	S	G	F	C	L	G	Q	L	N	L	116
TAC	GAC	CTA	CCT	CAG	GGC	AGC	GGC	TTC	TGC	CTG	GGC	CAG	CTC	AAC	CTG	1379
E	S	V	R	R	T	R	S	K	I	G	F	G	I	L	L	136
GAG	TCG	GTG	CGG	CGA	ACG	CGC	AGC	AAG	ATC	GGC	TTC	GGC	ATC	CTG	CTC	1439
D	G	V	W	A	Y	N	R	G	E	H	P	I	F	V	N	156
GAC	GGC	GTG	TGG	GCC	TAC	AAC	CGC	GGC	GAG	CAC	CCC	ATC	TTC	GTG	AAC	1499
D	A	P	G	G	R	A	L	V	V	R	K	V	P	P	G	176
GAC	GCG	CCC	GGC	GGC	CGC	GCC	CTG	GTG	GTG	CGC	AAG	GTG	CCC	CCC	GGC	1559

FIG.6B

V F D G A C T T C G A G C G C T C G G G C T G C A G C A C G C G C C C G A G C C C G A C G C C G A C G G C	196
1619	
P Y D G A C C C A A C A G C G T C C G C A T C A G C T T C G C C A A G G G C T G G G G C C C T G C T A C T C C	216
1679	
R Q F I T S C P C W L E I L L N N P R •	236
C G G C A G T T C A T C A C C T C C T G C T G G A G A T C C T C A C A A C C C A G A T A G	1739
T G C G G C C C G G G G G G G G G G G G G G G G C C C A C C T G C G A G G G G C C G A T G C C C A G A	1818
G A C A C A G C C C C C A C G G A C A A A A C C C C C C A G A T A T C A T C T A C C T A G A T T T A T A T A A A G T T T T A T A T A T A T A T G G A A A T	1897
A T A T A T T A C T T G T A A T T A T G G A G T C A T T T T A C A A T G T A A T T A T T A T G T A T G G T G C A A T G T G T A T A T G G A C A A A	1976
A C A G A A A G A C G C A C T T T G G C T T A T A A T T C T T T C A A T A C A G A T A T A T T T C T C T C T C C T C C T C T C T T A C T	2055
T T T T A T A T A T A T A A A G A A A T G A T A C A G C A G A G C T A G G T G G A A A G C C T G G G T T G G T A T G G T T T T T G A G A T A	2134
T T A A T G C C C A G A C A A A A A G C T A A T A C C A G T C A C T C G A T A A T A A A G T A T T C G C A T T A G T T T T T T T A A A C T G T C T T C T	2213
T T T T A C A A A G A G G G C A G G T A G G G C T T C A G C G G A T T T C T G A C C C A T C S T G T A C C T T G A A A C T T G A C C T C A G T T T T C A A G	2292
T T T T A C T T T T A T T G G A T A A A G A C A G A C A A A T T G A A A A G G G A G G A A A G T C A C A T T A C T C T T A A G T A A A C C A G A G A A A G	2371

FIG. 6C

TTCTGTTGTTCCCTGCCCCATGGCTATGGGGTGTCCAGTGGATAGGGATGGCGGTGGGGAAAAGGAGAAATACACTGG 2450  
 CCATTTATCCTGGACAAGCTCTTCCAGTCTGATGGAGGAGGTTTCATGCCCTAGCCTAGAAAGGCCCAGGTCCATGACCC 2529  
 CCATCTTTGAGTTATGAGCAAGCTAAAAGAAGACACTATTTCTCACCATTTTGTGGAATGGCCTGGGGAACAAAGACT 2608  
 GAAATGGGCCCTTGAGCCCCACCTGCTACCTTTCAGAGAAACCATCTCGAGCCCCGTAGATCTTTTAGGACCTCCACAGGC 2687  
 TATTTCCACCCCCCAGCCAAAAATAGCTCAGAACTCGCCCATCCAGGGCTGTATTAATGATTTATGTAAAGGCAGATG 2766  
 GTTTATTTCTACTTTGTAAAAGGGGAAAAGTTGAGGTTCTGGAAGGATAAATGATTTGCTCATGAGACAAAAATCAAGGTT 2845  
 AGAAGTTACATGGAATTGTAGGACCAGAGCCATATCATTAGATCAGCTTTCTGAAGAATATTCTCMAAAAAAGAAAGTC 2924  
 TCCTTGGCCAGATAACTAAGAGGAATGTTTCATTGTATATCTTTTCTTGGAGATTATATTAAACATATTAAGTGCTC 3003  
 TGAGAAGTCCTGTGTATTATCTCTTGCTGCATAATAAATTATCCCCAAACTTAAAAAAGAAAAAAGAAAAAAGTCTGA 3082  
 G 3083

FIG.6D

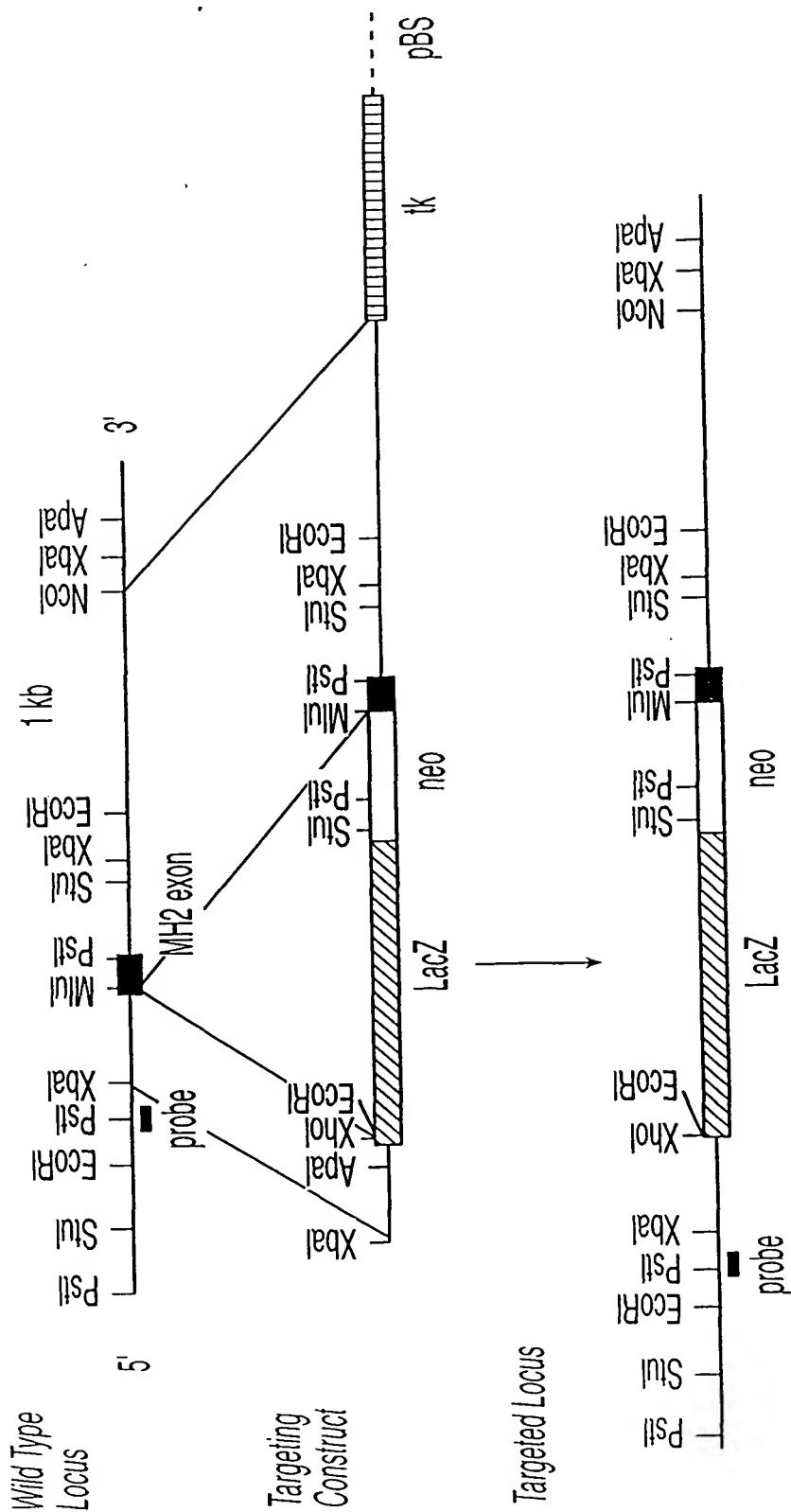


FIG. 7A

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FIG. 7B

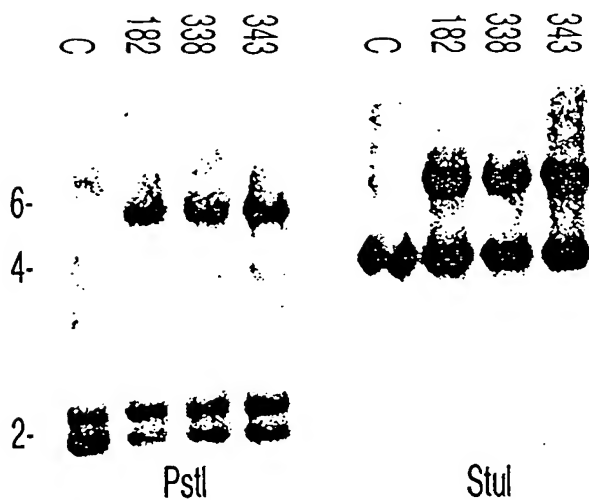


FIG. 7C

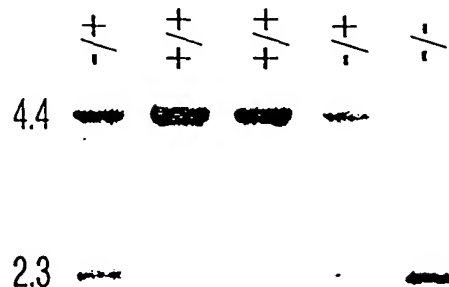
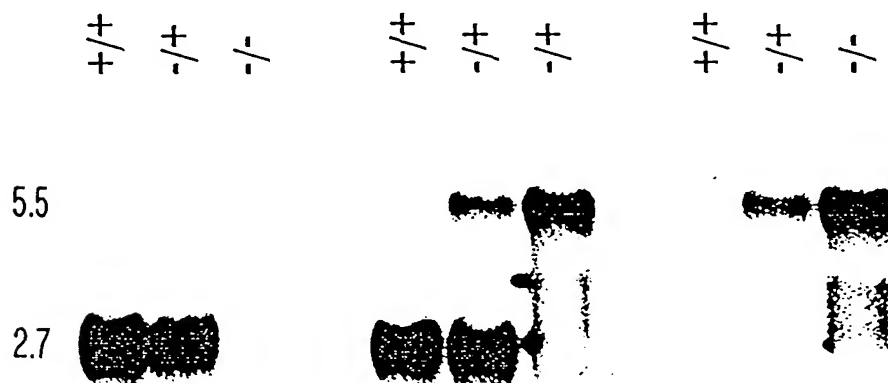
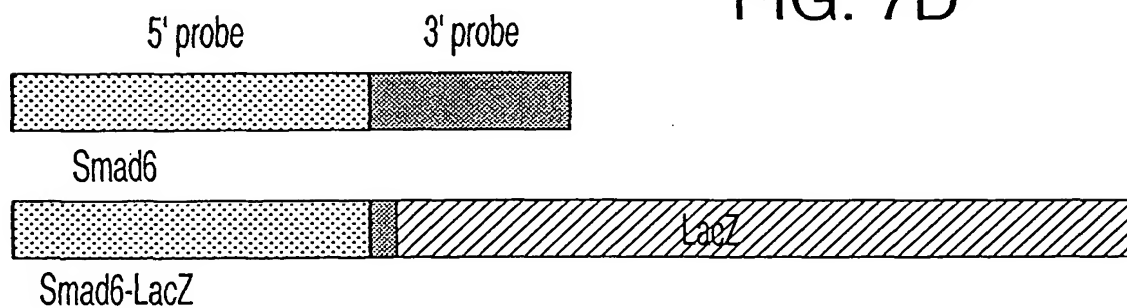


FIG. 7D



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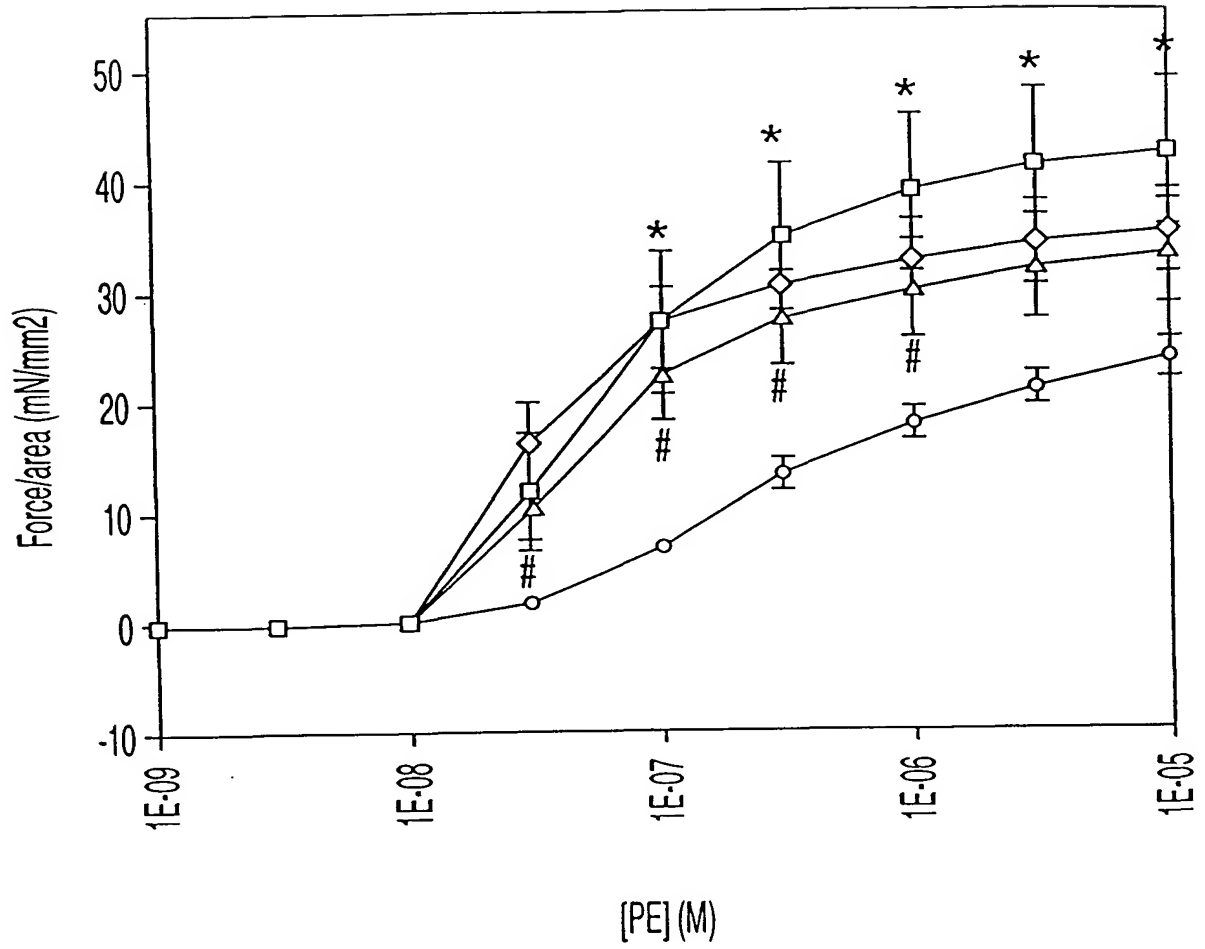


FIG. 8

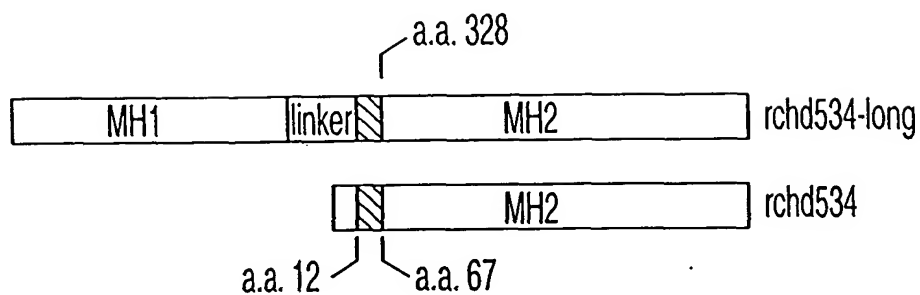


FIG. 9

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ACGAGGACGACAGGCTGTGCGCGGTCTGCACGGCGCTCCGCGGCGGAGCTTCATGTGGGGCTGCGACCCGCGCAGCCGG 79

FIG. 10A

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E T E A T N S L I T A P G E F S D A S M 321  
GAA ACG GAG GCT ACC AAC TCC CTC ATC ACT GCT CCG GGT GAA TTC TCA GAC GCC AGC ATG 1117

S P D A T K P S H W C S V A Y W E H R T 341  
TCT CCG GAC GCC ACC AAG CCG AGC CAC TGG TGC AGC GTG GCG TAC TGG GAG CAC CGG ACG 1177

R V G R L Y A V Y D Q A V S I F Y D L P 361  
CGC GTG GGC CGC CTC TAT GCG GTG TAC GAC CAG GCC GTC AGC ATC TTC TAC GAC CTA CCT 1237

Q G S G F C L G Q L N L E Q R S E S V R 381  
CAG GGC AGC GGC TTC TGC CTG GGC CAG CTC AAC CTG GAG CAG CGC AGC GAG TCG GTG CGG 1297

R T R S K I G F G I L L S K E P D G V W 401  
CGA ACG CGC AGC AAG ATC GGC TTC GGC ATC CTG CTC AGC AAG GAG CCC GAC GGC GTG TGG 1357

A Y N R G E H P I F V N S P T L D A P G 421  
GCC TAC AAC CGC GGC GAG CAC CCC ATC TTC GTC AAC TCC CCG ACG CTG GAC GCG CCC GGC 1417

G R A L V V R K V P P G Y S I K V F D F 441  
GGC CGC GCC CTG GTC GTG CGC AAG GTG CCC CCC GGC TAC TCC ATC AAG GTG TTC GAC TTC 1477

E R S G L Q H A P E P D A A D G P Y D P 461  
GAG CGC TCG GGC CTG CAG CAC GCG CCC GAG CCC GAC GCC GCC GAC GGC CCC TAC GAC CCC 1537

N S V R I S F A K G W G P C Y S R Q F I 481  
AAC AGC GTC GCG ATC AGC TTC GCC AAG GGC TGG GGG CCC TGC TAC TCC CGG CAG TTC ATC 1597

T S C P C W L E I L L N N P R \* 497  
ACC TCC TGC CCC TGC TGG CTG GAG ATC CTC CTC AAC AAC CCC AGA TAG 1645

TGGCGGCCCCGCGGGAGGGGCGGGTGGGAGGCCGCGGCCACCGCCACCTGCCGGCCTCGAGAGGGGCCGATGCCCAGA 1724

GACACAGCCCCACGGACAAAACCCCCCAGATATCATCTACCTAGATTTAATATAAAGTTTTATATATTATATGGAAAA 1803

AAAAAAAAAAAAA 1817

FIG.10B